

Carson (jos)

ADDRESS

DELIVERED

TO THE GRADUATES

OF

THE PHILADELPHIA COLLEGE OF PHARMACY,

APRIL 23d, 1839.

Box 3 -

BY JOSEPH CARSON, M.D.

PROFESSOR OF MATERIA MEDICA AND PHARMACY.

29529

PHILADELPHIA:

MERRIHEW AND THOMPSON, PRINTERS,

No. 7 Carter's Alley.

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1839.

A D D R E S S.

GENTLEMEN:

To comply with an established custom, I present myself before you upon the present occasion, having been appointed the organ of the Institution, in which have been pursued the studies requisite to qualify you for the exercise of your profession. In addressing you, however, it would be impossible to divest myself of the feelings and sympathies which have arisen from the relation hitherto existing between us; a relation originating in the part I have taken in the direction of your studies. Still retaining, therefore, the recollection of the office as your teacher, through which I have been intimately associated with you, I conceive that I am acting in a two-fold capacity, and that while my claims upon your attention are strengthened, I am impelled, by an additional motive, to execute faithfully the last official duty in which you are interested.

From the evidence adduced upon examination before the constituted authority, your acquirements in the branches of science taught in the College of Pharmacy, and the proficiency you have attained in the pharmaceutic art, have been deemed sufficient to entitle you to the honors of graduation, the reward merited by your assiduity and careful preparation to deserve them. My first impulse is, to congratulate you upon the happy fulfilment of the laudable aspirations by which you have been actuated in pursuing your probationary course, and in so doing, I may assert, I have the heartfelt concurrence of my coadjutor and the members of the College. But it would be an abuse of the trust confided to me, did I indulge in extended complimentary remarks upon the attention given to preliminary qualifications; much worthier are the purposes designed by my appointment; and with the desire of fulfilling

them, I shall take advantage of the opportunity, to impress upon you correct views of the profession you have chosen, to indicate the objects you should strive to attain, the means you should employ, and the motives by which you should be governed. These will be the topics of the discourse to be delivered.

The profession of Pharmacy is one of those having for their object the good of mankind; it is inseparably connected with the general welfare. To appreciate its importance, it is only needful to look back through the vista of time, and recognise its existence from the earliest date. The benefits derived from it have been admitted to be of the highest consequence, and public opinion has at every period been kindly affected towards it, as evinced by the estimation in which it has been and continues to be held. Nor from the duties it imposes, could the regard conferred be more richly deserved by any other employment; like the profession of medicine, of which it is the handmaid, it has been called into operation by necessity, and owes its origin to the frailties, the infirmities, the perishable condition of the human family. It affords resources against pain, disease, and death, and has a powerful influence over the passions and the affections of man, as it is capable of exciting his hopes, allaying his fears, and ministering to his comforts and wants.

Were we merely indebted to Pharmacy for the means of mitigating the ills of life, it would be sufficient to call forth expressions of merited commendation. But there is another point of view under which it is to be considered, which is, the agency it has exercised in promoting the advancement of our race, by communicating a power over external circumstances, through efficient instruments, which have been successfully employed with this effect. In attributing to Pharmacy the credit of bestowing innumerable advantages which are now possessed, it must be regarded as a comprehensive science, embodying a number of subsidiary departments, each of which has a separate sphere of usefulness. However independent they may appear of a parent stock, it should be borne

in mind, that they were originally the offspring of pharmaceutic investigation, and in their infancy were sustained by the fostering care and nourishment which this afforded. The objects that first excited attention, were the articles composing, or likely to contribute to the *materia medica*; the researches instituted were such as would lead to a more extensive acquaintance with their nature, peculiarities, mutual relations, and uses. The first naturalists and natural philosophers were pharmaceutists, who entered upon an exploration of the material world, solely with the desire to add to their facilities of practice. With so extensive a field, it could not be otherwise than that an abundant harvest of discovery should reward the labor of observation and experiment, and that knowledge, general as well as particular in its application, should be elicited; to this is to be traced the birth of Chemistry, Botany, Zoology, Mineralogy, and Natural Philosophy, the branches of which Pharmacy is composed. It is not essential to enter into the details, by an exposition of which it could be shown, that these sciences have been of indispensable service in promoting the arts, whereby the lowest member of a civilized and refined community is incomparably superior to the savage—they are known to every one who is the least conversant with the subject: Agriculture, Manufactures, Commerce, and even Literature, have been more or less indebted to them. Surely, then, it is not an assumption to assert, that Pharmacy has performed a conspicuous part in working a favorable change upon the physical as well as moral condition of mankind, in revolutionizing the aspect of the social state. Hence it is entitled to a larger proportion of respect and gratitude.

But Pharmacy is yet more fortunate; for while it should be cherished, on account of its direct utility, it furnishes subjects for contemplation, that can attract, elevate, and improve the mind. Let me present the grounds of this opinion. The sciences enumerated are devoted to the scrutiny of Nature, implying an examination of her productions, and the determination of the forces every where operative in the origination of phenomena. How ample the range it offers! Take either Botany, Zoology, or Mi-

ralogy, and its objects are not confined to place or country; there is no restriction to its inquiries, except that which the limits of the earth impose; for in every region the most valuable treasures have been detected. How diversified the structure, forms, and properties exhibited! Pass in review these several departments, and it will be manifest that each comprises a multitude of individual existences, dissimilar in construction, appearance, and inherent qualities. What order prevails among these beings! With what regularity are their parts conjoined, and with what subserviency of purpose are they fitted to one another! Examine an animal, a plant, or a crystal, and nothing can be detected at variance with an universal principle of harmony.

Extended as may be the sources whence bodies are derived, whether organic or inorganic, infinite as may be their forms, complex as may be their parts, and various as are their qualities, still investigation is not satisfied; Chemistry submits them to its operations, their composition is determined, and such as are compound are resolved into their simple elements; the laws that govern particles and masses, that regulate their movements, are expounded; the numerous processes through which matter must pass in the assumption of new shapes are developed, while the agents are indicated that serve to effect such modifications. From data thus supplied, the plan on which our globe is formed can be elucidated; Eternal wisdom and design can be made evident. Now, I would ask, if such be the nature of the pursuits embraced by Pharmacy, if such the tendencies of which they are susceptible, when carried to their full extent, where can there be found others possessed of greater fascination? By which among the many classes of human learning, can higher tone of intellect be given?

Again, while thus expressing our views of the nature and tendencies of the pursuits connected with Pharmacy, let us observe the influence they are capable of exerting upon the mental faculties. The facts that constitute the knowledge necessary to be acquired, are not seen through the dim me-

dium of conjecture, but have been revealed and made conspicuous from close, accurate, and reiterated inspection; they are based upon the strictest evidence. Neither are they promiscuously commingled: for they have been so arranged and systematized, as to render their perpetuity indubitable, and their attainment easy. For these reasons, this knowledge is entitled to the name of *positive*. It regards demonstration as indispensable to establish propositions, and admits no conclusions to be sound but such as have been arrived at by rigid induction. To avoid the causes of deceit, the perception must be aroused, the reasoning powers invigorated, and such mental training is enforced, as to be productive of lasting beneficial consequences. Nor are the advantages of discipline, imposed by pharmaceutic studies, when rightly conducted, confined to their own circle; the habitual preciseness of reflection they engender, extends to other subjects, and facilitates the formation of correct opinions upon all things; the judgment, prepared and fortified against the attack of specious fallacies, or false pretensions, remains unbiassed in its decisions, undazzled by the glare that plausibility may throw around assertions, having the semblance, but not the reality of truth; it has settled principles to rely upon, and protected by the firm and serviceable Ægis which they form, is unaffected by the shafts that subtle error may direct.

In the delineation given, I believe that an over estimate has not been made of the services rendered by an enlightened profession, and that too high a valuation has not been placed upon its acquirements—they are eminently liberal.

Having selected this profession, and assumed its most serious responsibilities, the obligation rests upon you to acquit yourselves of them with fidelity. For the purpose of becoming competent to the fulfilment of your duties, you have attended the preparatory courses of instruction; you have familiarized yourselves with the leading facts and principles of the tributary departments of science, but here is not the conclusion of your labors; what you have so far accomplished can only be considered as rudimental; the ground work only

has been laid of the edifice to be built hereafter; the materials you at present possess are not sufficient for its completion; a larger amount must be collected, and they can only be procured by sedulously cultivating the same pursuits: the just proportions into which they will be moulded, the degree of finish that will be communicated, will be indicative of your ability and industry. Hitherto, as pupils of this school, you have submitted to its authority, you have acknowledged its jurisdiction; but emancipated from its control, henceforward you are answerable to the public, and must seek its approbation; its favor will be awarded or withheld as you may appear deserving or unworthy.

When commencing a profession, the resolution should be formed, not to fall short of excellence; and this is in accordance with the natural impulses of an ingenuous mind. True superiority, however, is dependant on other circumstances, besides a spontaneous origin; it must be created by the endeavors of the individual who aspires at its possession. It is impossible to attain to it without exertion; if reached at all, it must be by diligence, energy, and vigilance; qualities which, if properly cherished and rightly directed, will lead to the best results. The irregular exercise of talents, called into activity upon extraordinary occasions which may be favorable for their display, may be productive of ephemeral applause, but the success that may attend the evidence of their power cannot outlive the moment, if they be permitted to relapse into sluggishness and inactivity. It is absolutely requisite that they should be employed in a way that will always contribute to some good purpose, constantly be conducive to some beneficial end, and which, at the same time, will maintain them in a condition of readiness to meet the most urgent demands that may be made upon them. It is by this alone that efficiency is bestowed, which renders the struggle for advancement not fortuitous as regards the issue, while its possessor, moreover, can readily sustain himself in the elevated station to which he has been raised. Conjoined with uprightness and rectitude of conduct, the rewards are sure and permanent,

for competency and usefulness are evidences of its possession. The superiority alluded to is essential to the pharmacist; without it, he can neither exercise his vocation with credit to himself, or with advantage to those dependant on him; it is understood to mean a thorough comprehension of every particular relating to his art, a facility and readiness of application under all possible emergencies, and to this goal his untiring efforts must be directed.

By tracing the history of Pharmacy through by-gone ages, and contrasting the conditions presented at different eras, we shall learn to appreciate the progress it has made. Here a close analogy will be found between it and other kindred sciences. From an examination of this kind, it will be perceived, that the supply of substances to be submitted to its manipulations has been greatly augmented, while the exactitude of these manipulations has been increased; that improvements have steadily been added, that accessions of every description have uniformly poured in upon it, contributing to render it more complete. Ready ingenuity and fertile invention have been expended in its behalf, with the especial object of better adapting it to fulfil its offices; nor have they been exhausted; endeavors having a similar tendency, are as energetically in operation, at the present time, as at any former period, and the same success attends them; to prove that such is the case, we need but refer to the announcement of new discoveries with which the numerous periodicals are teeming, and which each year brings into application. The pharmacist, therefore, cannot be stationary in his knowledge; adequate as he may be to the transaction of his business when he begins it; he must keep pace with it; he must advance as it advances, otherwise he will be outstripped by more enterprising competitors. To maintain his standing, unremitting attention is indispensable, in order that he shall not be behind the information of the day, that he shall be enabled to appropriate to his own uses the latest improvements that have been made. In a word, it is important that he should be a reader.

It may be supposed by some, that the indulgence of studious inclinations is incompatible with those business habits which must be acquired before success can be commanded; be this as it may with other occupations, the pharmacist is obliged to prosecute his studies ardently; so to combine them with his more active engagements, as to have ample leisure for both; so to make the one subservient to the other, that intelligence and intellectual culture shall be apparent, and promptness, order, and regularity in the management of his concerns shall not be wanting. He whose deficiencies are obvious cannot expect to prosper, to secure the confidence of his fellow-citizens, to arrive at respectability. It is absurd to urge the plea, that time is not afforded to devote to the cultivation of that science, on a full acquaintance with which the very affairs depend that he is solicitous should thrive: it is but the subterfuge of ignorance; it may satisfy himself, but will not serve as an apology with the community. Neglect of either study or business is equally fatal; to each must be given a proper share of attention to form an accomplished pharmacist. To deal in drugs, to vend them merely, may not require the aid of science; but to modify them, to combine them, so that they shall fulfil the purposes of the physician; to render them fitted for administration to the sick, requires all the assistance that science is capable of yielding; and so surely as total failure will ensue, if undertaken without suitable qualifications, a corresponding result will be experienced, if such qualifications are not preserved, by a constant perusal of the treatises and publications devoted to the extension of the theory and practice of Pharmacy.

Nor ought the pharmacist exclusively to confine his reading to the subjects of his profession; he should make to contribute to his improvement a variety of information, which, by extending his ideas, and increasing his powers of usefulness, will enable him to become a more valuable member of society, without endangering inattention to his main pursuit.

Beside the possession of adequate knowledge, and sufficient

skill to perform the duties of his profession, the reasonable expectation is entertained, that every one should use his exertions to promote its farther progress, and this is binding, in proportion to ability and opportunity. Science and art generally are more benefited by the limited contributions of the many, when taken in the aggregate, than by the more numerous additions of a few. How much greater is the proportion of names appended to a small number of observations, than of those upon which enviable distinction has been conferred by the extent and brilliancy of discoveries; and has it not often occurred that a single fact, announced by an unpretending individual, has been the starting point of important researches, by which exalted reputation has been obtained? How frequently has it happened, that a principle or law, that has revolutionized the whole body of doctrines previously accredited, has arisen from scattered, isolated truths, when to each has been given its appropriate position in a category; and yet he who has made a valuable observation, announced an unknown fact, or elicited important truths, is as well a benefactor of his age, as he who from them can fabricate a system. Could LINNÆUS or JUSSIEU, have formed their incomparable methods of classification, without subsidiary assistance freely procured by them from humbler laborers in the cause of Botany? Could LAVOISIER, DALTON, or GAY LUSSAC, have framed their respective theories of combustion, of atoms, of volumes, had they not been aided by antecedent and cotemporary operatives? Unrivalled as were the achievements which these illustrious men were capable of accomplishing, it would not have been possible for them to attain so high a degree of eminence, to render themselves so worthy of admiration, had not the materials upon which to exercise their surpassing talents been abundantly furnished by industrious collaborators. The spirit of emulation should animate the inferior as well as superior functionaries of the temple of science; each one ministering at her altar should be zealous in discharging the duties of his station, for rank and dignity are apportioned as they are merited. All

who can observe may render their services available, by recording the result of their observations, and thus contribute to the establishment of a common repository, readily accessible to those gifted individuals, to whom exclusively appertains the power to generalize effectually.

By taking a retrospective view of his profession, and fully comprehending the obstacles which have been overcome, the difficulties over which it has triumphed, the pharmacist will understand the means by which it has gradually assumed a position among the most estimable of which civilization can boast. If it be found that a high order of talent has been occupied with its details, it will, at the same time, be apparent, that indefatigable perseverance has been most effectual in bestowing so elevated a stand. Numerous examples might be cited to show, that discoveries the most remarkable, recorded on the pages of its annals, have been effected by the protracted exertions, not of one, but of many investigators; one or two of the most striking will be sufficient for illustration. Thus, the elaborate researches of PELLETIER and CAVENTOU, which eventuated in the entire development of the constituent principles of Cinchona, were preceded by those of GOMEZ, of DUNCAN, and of others still more antecedent; and the merit of having led the way in the detection of the ingredients of opium, is due to DEROSNE, SERTUERNER, and SEGUIN, while by ROBIQUET, PELLETIER, DUMAS, and COUERBE, have they been fully revealed, and made subservient to use. Such instances are not to be disregarded, as from them can be derived ample encouragement to make known novel phenomena, under whatever circumstances occurring, as sooner or later they will be correctly interpreted.

In a narrative of past events, those of the future appear prefigured. The same succession will take place. If therefore, the pharmacist be influenced by a desire to assume an active part in promoting the farther progress of his profession, he will allow no occasion to escape improvement; he will ever be upon the alert to seize the opportunities that may occur; nay, further, he will solicitously seek them; and the individuals to whom Pharmacy is most indebted, have manifested unfail-

ing readiness in so doing. But I need not dwell longer upon such considerations; those which have been brought before you are too plain to be misunderstood; they cannot be otherwise than admitted. Let them, then, be treasured in your memory; accustom yourselves to apply them as a profitable lesson for your guidance.

In addition to personal inducements, and the debt due to science, there remains a purpose, to be accomplished by cultivating your profession, which is paramount to all others, and which should never be lost sight of; I allude to its elevation and maintainance at home, upon an equality with the highest standard of proficiency to be found elsewhere. In this resides a legitimate source of emulation, and with this end in view, even rivalry may be permitted, as universal benefit alone can flow from it. To such a cause may be attributed, in part, the extraordinary advances made by Pharmacy since the commencement of the present century; and we may judge, how active must have been the feeling, when between nations, foreign to each other, the echo of one reported discovery or improvement, was but the announcement of another. The pharmacutists of France, of Germany, of England, seem especially to have been ambitious of the award of precedence, and by entering the arena of this praiseworthy competition, have exalted the professional reputation of their respective countries, at the same time, that by their united labors, they have bestowed innumerable blessings upon the world at large; among their number could be cited individuals, affording the noblest models for imitation, on whom the warmest expressions of eulogy might deservedly be expended. Agreeable as would be the occupation, I cannot dwell long, or minutely, upon the picture exhibited by the flattering condition of Pharmacy in the more favored regions of Europe, and I must turn to notice briefly its state in our own land, whither it has been transplanted. In venturing on this topic, I am aware the ground on which I tread is difficult, and I shall only introduce it so far as will enable me to carry out the tenor of the reflections on which I have already entered.

Pharmacy, with us has experienced some vicissitudes of fortune, and undergone changes of a nature calculated to conduce to its amelioration; these have in part been attributable to the surrounding circumstances by which it has been influenced, and partly to the well devised measures adopted by those to whom its guardianship has been committed. A long time has not elapsed, since it has been erected into a separate and independent profession, prior to which occurrence, it formed a portion of the avocations of the physician; the period had arrived when a separation became expedient, determined by the growing demands of the community, and the ample patronage that could be conferred upon a distinct body of pharmaceutists; such a step was well calculated to promote its interests. Among a people constituted like ourselves, of whom the predominant feature is stirring enterprise, prevalent among all classes and in every pursuit, it were not possible that Pharmacy should remain unaffected by the activity around; consequently, soon after the transfer alluded to was effected, its susceptibilities of better management and regulation were so evident to the enlightened gentlemen to whose hands it was intrusted, as to induce them to make an attempt to remedy its deficiencies; and the results evince the wisdom, zeal, and spirit by which they were actuated. Under their auspices, the basis of a reformation was established, the extent of which, though small at first, has gradually increased, and now holds out the prospect of universal prevalence. It enters not into my plan to specify the innovations that have been made, the abuses that have been corrected, the imperfections that have been remedied, through their instrumentality; the contrast between the practices noticed at present in the shops of pharmaceutists, and those formerly to be met with, affords the fullest testimony on these points. Nor do I intend to expatiate upon the success of their endeavors to augment the facilities of information; to secure superior advantages of education for succeeding aspirants; to diffuse, extensively, knowledge upon all subjects connected with the profession; with these you are familiar, as in their enjoyment you have participated; but I would, by here referring to

them, derive the incentives by which to stimulate your ambition, and urge upon you not to withhold your aid in hastening this great work of reformation, in demonstrating that Americans are not behind the age in talent or acquirement; and further exhort you, not to relax in effort, until the last vestige of foundation for the assertion has been removed, "that with us, Pharmacy, which has so greatly contributed to augment chemical science, and to enrich medicine with a host of new remedies, is considered rather as a business than a scientific profession."

In conclusion, I shall advert to a subject involving the standing of the profession as deeply as any of the considerations that have been insisted on, and which pertains to the high honor and strict integrity which should be preserved in all its transactions, and of which its practitioners should be most jealous. It has been remarked by a presiding officer of this College, on an occasion like the present, that Pharmacy is possessed of "tender reputation," an expression of its character as felicitous as it is true; at once intimating the readiness with which it may be tarnished, by acts the least at variance with the established laws of propriety, and the ruinous consequences that must attend their perpetration. Organized as the world now is, every honorable occupation may be perverted and disgraced by the designing and unprincipled, but such, especially, is the case with Pharmacy, which, from inherent causes, is more exposed and open than any other to the practices of imposition, which either entirely elude or are difficult of detection. Its processes are complicated and necessarily elaborate; many of the substances with which it manipulates, either naturally possess a resemblance in sensible properties, or may be made to assume a similarity by art, more wonderful than alchymy. The persons to whom are dispensed its products, are generally the ignorant and unwary, who easily yield themselves the victims of deception; and as there are no legislative enactments by which it may be checked in its career, fraud in its Protean forms stalks with impunity throughout the land, amenable to no tribunal, and scarcely at the bar of public opinion. In the scheme of instruc-

tion with which you have been presented, it has been invariably an object to point out, and comment upon the methods by which fraudulent practices are accomplished, and to provide you with tests whereby to discriminate between spurious and genuine articles of the materia medica; in your hands this knowledge may be made a blessing or a curse, it may constitute you benefactors of your fellow citizens, or the veriest scourges that infest society. But I fear not that your acquirements will be applied to any improper uses. I entertain the belief that you have too long breathed a healthful moral atmosphere, to exist amidst the noxious vapors of imposture. I little apprehend a prostitution of your talents to the unworthy purposes of surreptitious gain; but rather possess the confident assurance, that by your future conduct you will evince the utter detestation in which you hold every thing approaching a dereliction of the most rigid honesty, and that, should ever sophistication, the opprobrium of your profession, be brought within your notice, you will lend your willing aid in its exposure.

Having now performed the task assigned to me, I shall terminate my remarks by expressing the hope that what has been said will be productive of future advantage to you. The matters of which I have treated are of the highest consequence, possessing an especial bearing upon the success attending your efforts in life; they constitute, however, but a small proportion of those which might have been profitably brought forward; the void must be filled by your own information, aided by good sense and experience. Doubtless, by these means, you will arrive at the most correct views of duty, and will undeviatingly adhere to them. Yet I feel it obligatory upon me to remind you, that the contest in which you are about to engage is arduous, that all the resources at your command will be called into requisition, and the position you will assume, will depend upon the efficiency with which they are wielded; if failure be the result, you must sink into obscurity; if fortunate, you will be ornaments to your profession, and confer honor upon your *Alma Mater*.